



### DOW™ XUS180808 Reverse Osmosis Element

Ultra-High Pressure, High-Rejection, Reverse Osmosis Elements for Industrial Water Purification

#### Description

The DOW™ XUS180808 Reverse Osmosis Element is an ultra-high pressure element offering an industry wide unique combination of features:

- Up to 120 bar (1,740 psi), ultra-high feed pressure capability due to special element and membrane design
- Increasing the overall efficiency of Zero-Liquid-Discharge (ZLD) by achieving highest solute concentrations thus reducing the size of downstream thermal treatment
- Excellent for recovery of salts in process streams
- Robust DOW FILMTEC™ reverse osmosis (RO) membrane sheet;
- 34 mil feed spacer to lessen the impact of fouling on the pressure drop across a vessel and to enhance cleaning effectiveness.

#### Product Type

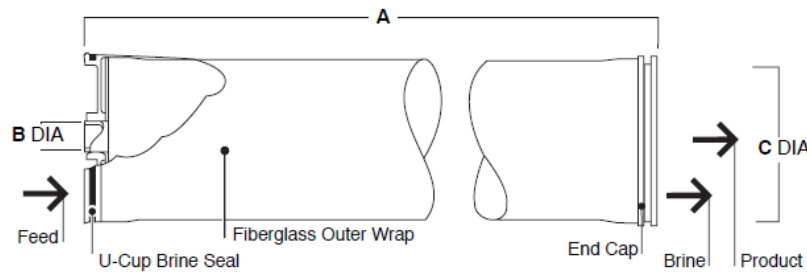
Spiral-wound element with polyamide thin-film composite membrane

#### Product Specifications

DOW™ Specialty Membrane Element	Active Area		Feed Spacer Thickness (mil)	Permeate Flow Rate		Typical Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
	(ft <sup>2</sup> )	(m <sup>2</sup> )		(GPD)	(m <sup>3</sup> /d)		
XUS180808	285	27	34	6,400	24.2	99.7	99.5

1. Permeate flow and salt (NaCl) rejection based on the following standard test conditions: 32,000 ppm NaCl, 800 psi (55 bar), 77°F (25°C), pH 8, 8% recovery.
2. Flow rates for individual elements may vary but will be no more than ± 15%.
3. Sales specifications may vary as design revisions take place.
4. Active area guaranteed ± 3%. Active area as stated by Dow Water & Process Solutions is not comparable to nominal membrane area often stated by some manufacturers. Measurement method described in Form No. 609-00434.

#### Element Dimensions



DOW™ Specialty Membrane Element	A		B		C	
	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
XUS180808	40.0	1,016	1.125 ID	29 ID	7.9	201

1. Refer to Dow Water & Process Solutions Design Guidelines for multiple-element applications. 1 inch = 25.4 mm
2. Element to fit nominal 8-inch (203-mm) I.D. pressure vessel.

## Operating and Cleaning Limits\*

Maximum Operating Temperature <sup>a, d</sup>	113°F (45°C)
Maximum Operating Pressure at 30°C <sup>d</sup>	1,740 psig (120 bar)
Maximum Element Pressure Drop	15 psig (1.0bar)
pH Range, Continuous Operation <sup>a</sup>	2 – 11
pH Range, Short-Term Cleaning (30 min.) <sup>b</sup>	1 – 13
Maximum Feed Silt Density Index (SDI)	SDI 5
Free Chlorine Tolerance <sup>c</sup>	< 0.1 ppm

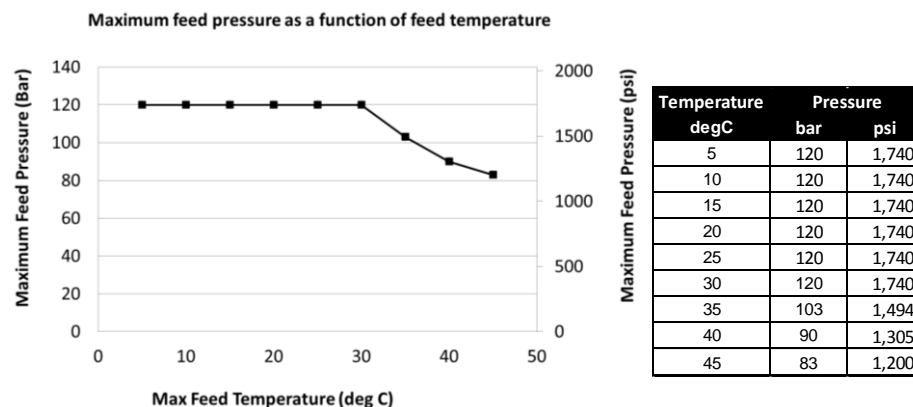
\* Results may vary depending on specific operating conditions.

<sup>a</sup> Maximum temperature for continuous operation above pH 10 is 95°F (35°C).

<sup>b</sup> Refer to guidelines in specification [sheet 609-23010](#) for more information.

<sup>c</sup> Under certain conditions, the presence of free chlorine and other oxidizing agents will cause premature membrane failure. Since oxidation damage is not covered under warranty, Dow Water & Process Solutions recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to [technical bulletin 609-22010](#) for more information.

<sup>d</sup> Relation between maximum allowed feed pressure and maximum feed temperature:



## Additional Important Information

Before use or storage, review these additional resources for important information:

- [Usage Guidelines for DOW FILMTEC™ 8" Elements \(technical bulletin 609-50176\)](#)
- [System Operation: Initial Start-Up \(technical bulletin 609-02077\)](#)
- [Handling, Preservation and Storage \(technical bulletin 609-02103\)](#)

## Regulatory Note

These membranes may be subject to drinking water application restrictions in some countries; please check the application status before use and sale.

## Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

## Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support.

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**DOW™ Speciality Membranes**

Notice: The use of this product in and of itself does not necessarily guarantee the removal of cysts and pathogens from water. Effective cyst and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.

**NOTICE:** No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. **NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.**

